PROCEDURE FOR THE CALIBRATION OF THE 400 mL MEASURE ASTM C 185

A. PURPOSE

The purpose of this procedure is to calibrate the 400 mL measure. This verification is made annually (see note). ASTM requires a calibration every 30 months.

B. APPARATUS REQUIRED

l. Certified thermometer capable of measuring the required range.

2. Distilled or demineralized water.

3. Calibrated scales.

4. Temperature correction chart.

5. Glass plate.

C. PROCEDURE

1. Zero scales.

2. Place the measure and the glass on the scales and record the weight.

3. Add distilled water to the measure until it is slightly overfilled. Take the glass plate and slide it across the measure so that the glass is in contact with the rim of the measure and the water. Be sure that there are no air bubbles in the measure.

4. Wipe excess water from the measure.

5. Place the measure with water and glass plate on the scales and obtain and record the weight.

6. Subtract the weight of the measure and glass from the weight of the measure, the glass, and the water.

7. Obtain the temperature of the water.

8. From the correction chart, determine the correction factor and make the correction as needed.

9. Make the calculations as follows:

$$\text{Correction Factor} = \frac{\text{Weight of water}}{0.9976}$$

D. TOLERANCE

The measure shall be marked with the correction factor.

Note: The CCRL inspection shall be used as the calibration record.

EQUIPMENT CALIBRATION RECORD

Calibrated By: _____ Date: _____

Equipment: 400 mL Measure Location (Lab): _____

Identification No.: _____ Calibration Frequency: 12 months

Previous Calibration Date: _____ Next Due Date: _____

Calibration Equipment Used: Certified thermometer, SN: _____ Distilled water Glass plate

Calibrated scales, SN: _____

Calibration Procedure: (In-house) OMR-CVP-47 / ASTM C 185

Measure I.D. Number _____

Weight of clean, dry and empty measure and glass..... _____

Weight of measure filled with distilled water and glass..... _____

Weight of water ..... _____

Temperature of water..... _____

Weight of water correct for temperature

$$\text{Correction factor} = \frac{\text{Weight of water (correct for temperature)}}{0.9976}$$

Correction factor _____